

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A surface cooled heat exchanger comprising:
a stack of elongate plate pairs, each plate pair including first and second plates having elongate central portions surrounded by sealably joined edge portions with a fluid passage defined between the central portions; each plate pair having spaced apart inlet and outlet openings that are connected together for the flow of fluid through the fluid passages; each plate pair having an exposed elongate fin plate extending peripherally outward from the joined edge portions along a length of the plate pair, said plate pairs including two end plate pairs and intermediate plate pairs arranged between the end plate pairs, each end plate pair abutting on one side thereof with a respective one of said intermediate plate pairs, the elongate central portion of the first plate of each intermediate plate pair abutting the elongate central portion of the second plate of an adjacent one of the plate pairs.
2. (Original) The heat exchanger of claim 1 wherein each fin plate has a varying profile along a length thereof.
3. (Original) The heat exchanger of claim 2 wherein the fin plates each define a plurality of spaced apart slots along a length thereof.
4. (Original) The heat exchanger of claim 3 wherein the slots are open ended at an outwardly extending end thereof.
5. (Original) The heat exchanger of claim 2 wherein the varying profile includes a plurality of louvered slots located along at least some of the fin plates.

6. (Original) The heat exchanger of claim 2 wherein the varying profile includes a plurality of expanded convolutions provided along at least some of the fin plates.

7. (Original) The heat exchanger of claim 2 wherein the fin plates of adjacent plate pairs come into intermittent contact with each other at a plurality of spaced apart locations along a length thereof.

8. (Currently Amended) The heat exchanger of claim 1 wherein the elongate central portions extend substantially from a first end to a second end of the plate pair of adjacent plate pairs in the stack are spaced apart from each other and said elongate central portion of the first plate of each intermediate plate pair abuts the elongate central portion of the second plate of an adjacent plate pair substantially from the first end to the second end thereof.

9. (Original) The heat exchanger of claim 1 wherein the fin plate of each plate pair is formed integrally with only one of the first and second plates thereof.

10. (Original) The heat exchanger of claim 1 wherein the fin plate of each plate pair is formed from a plate portion formed integrally with the first plate and a further plate portion formed integrally with the second plate.

11. (Original) The heat exchanger of claim 1 wherein the first plate includes a laterally extending flange around an outer edge of the edge portion thereof, the edge portion of the second plate being nested within the laterally extending flange, the fin plate extending from an edge of the laterally extending flange.

12. (Original) The heat exchanger of claim 1 wherein the heat exchanger is a snowmobile engine coolant cooler.

13. (Original) The heat exchanger of claim 1 wherein the elongate fin plates extend only from one elongate joined edge portion of the plate pairs.

14. (Currently Amended) A cooler for cooling snowmobile engine coolant, comprising:
a stack of elongate plate pairs, each plate pair including first and second plates that are joined together to define an elongate sealed internal passage for the engine coolant having spaced apart inlet and outlet openings, said first and second plates having elongate central portions surrounded by sealably joined edge portions, said internal passage being formed between said central portions of each plate pair and extending substantially from a first end to a second end of the respective plate pair, said plate pairs including two end plate pairs and intermediate plate pairs arranged between the end plate pairs, each end plate pair abutting on one side thereof with a respective one of said intermediate plate pairs, the elongate central portion of the first plate of each intermediate plate pair abutting the elongate central portion of the second plate of an adjacent one of the plate pairs substantially from the first end to the second end thereof, each plate pair including an enlarged elongate, exposed fin plate portion located adjacent a substantial length of the internal passage for receiving materials flung by a drive track of the snowmobile; and

mounting bracket means connected to the stack of plate pairs for securing the stack to the snowmobile.

15. (Original) The cooler of claim 14 wherein the mounting bracket means includes two L-brackets between which the stack of plate pairs is sandwiched.

16. (Original) The cooler of claim 14 wherein intermittent edge enhancements are provided along a length of the fin plate portion.

17. (Original) The cooler of claim 14 wherein the fin plates each define a plurality of spaced apart slots.

18. (Original) The cooler of claim 14 wherein a plurality of louvered slots are located along at least some of the fin plates.

19. (Original) The cooler of claim 14 wherein the stack is arcuately bent about an axis thereof.
20. (Original) The cooler of claim 14 wherein the fin plates of adjacent plate pairs come into intermittent contact with each other at a plurality of spaced apart locations along a length thereof.
21. (New) A cooler according to claim 14 wherein said elongate central portion of the first plate of each intermediate plate pair is parallel to and in substantial contact with the elongate central portion of the second plate of an adjacent one of the plate pairs.
22. (New) A snowmobile having a chassis, a drive track, and a cooler according to claim 14 mounted between said chassis and said drive track, whereby during use of said snowmobile, engine coolant for said snowmobile can be cooled by one or more of the materials comprising slush, snow, ice, and water flung from said drive track.
23. (New) The cooler of claim 19 wherein said axis is parallel to the direction of internal fluid flow of said engine coolant through the internal passages during use of said cooler.
24. (New) The cooler of claim 23 wherein said cooler is arcuately bent to conform to an underbody of said snowmobile.